UNIVERSITI TEKNOLOGI MARA

IoT BASED HOME BURGLAR ALARM SYSTEM

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ABSTRACT

Home Burglar Alarm systems based IOT are networks of integrated electronic devices working together with a central control panel to protect against burglars and other potential home intruders. Nowadays, many alarm systems have been created. However, when the user is not at home, the user does not know that the thief has entered their home. This is because the home alarm system only uses sound or siren. There are 3 pieces of hardware consisting of switches, PIR motion sensors to detect movement, and cameras to see where the thief's position is located. From this sensor, the output will be displayed through LED lighting and a sound from a buzzer to notify users that something moves in their home and take steps to be careful. Then the data will be collected and sent to the user's Telegram application. With the home bugler alarm system, users will receive notifications on their mobile phones through the Telegram application. Even if the user is not at home, they can monitor their home remotely and when their home is entered by a thief, they can take follow-up actions. For example, making an emergency call or informing the neighbours and security guards. With the home bugler alarm system, the rate of theft cases can be reduced it will also reduce the use of energy and pets.

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TABLE OF CONTEN

CHAPTER ONE
INTRODUCTION

1.1 Introduction

The Internet of Things (IoT) has changed many aspects of our lives, and home security is one area where it has a lot of potential. The creation of IoT-based home burglar alarm systems is a novel strategy for increasing the safety and security of residential properties. This task centres around the execution of an IoT-based Home Criminal Caution Framework, which expects to address the rising worries with respect to home robberies and the requirement for cutting edge safety efforts. Home burglaries have turned into a huge worry, with crooks continually tracking down better approaches to break customary security frameworks. As a result, there is an increasing demand for security solutions that are more intelligent and sophisticated. The use of IoT in home robber caution frameworks considers consistent network between different gadgets and sensors, empowering ongoing observing, controller, and clever mechanization to improve security. The writing audit investigates the current examination and studies connected with IoT-based home thief caution frameworks. It analyses the condition of the innovation, remembering headways for sensor advances, correspondence conventions, information investigation, and user interfaces. Aside from accuracy, dependability, responsiveness, and user satisfaction, the review also investigates these systems' effectiveness and usability. The need for an advanced home burglar alarm system that effectively detects and prevents unauthorized access to residential properties is the issue addressed in this project. Customary security frameworks frequently have impediments with regards to continuous observing, controller, and clever dynamic abilities. As a result, a solution based on the Internet of Things that combines intelligent algorithms, sensors, and communication devices is required to improve user experience and security. By allowing for realtime monitoring, remote control, and intelligent decisionmaking, the hypothesis suggests that putting in place a home burglar alarm system that is based on the Internet of Things will significantly increase the level of security provided by residential properties. The examination questions dig into explicit perspectives that should be researched to approve the